BULLETIN OF THE SCHOOL OF EDUCATION INDIANA UNIVERSITY

Vol. XVII March, 1941 No. 2

Bureau of Cooperative Research
School of Education
Indiana University, Bloomington, Indiana

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Price, 50 cents
For sale by the University Bookstore,
Bloomington, Indiana

This bulletin is indexed by title in the following:
Bibliographic Index
The current literature section of the
Loyola Educational Digest
Wilson Education Index

Entered as second-class mail matter September 30, 1924, at the post office at Bloomington, Indiana, under the Act of August 24, 1912. Published in January, March, May, July, September, and November of each year from the University Office, Bloomington, Indiana.

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BULLETIN OF THE SCHOOL OF EDUCATION
INDIANA UNIVERSITY

The Scholastic Achievement of Athletes at Indiana University

by

HENRY LESTER SMITH

and

MERRILL T. EATON

A List of Bulletins in the Field of Education, Indiana University

by

KATHLEEN DUGDALE

Published by the
BUREAU OF COOPERATIVE RESEARCH
Indiana University

ACKNOWLEDGMENT

The authors of the bulletin are under special obligation to Oscar Philip Rausch, assistant in the School of Education, who helped in collecting and tabulating the data, and to Miss Kathleen Dugdale, who assisted in organizing and editing the manuscript.

H. L. S.
M. T. E.

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The Scholastic Achievement of Athletes at Indiana University

By Henry Lester Smith and Merrill T. Eaton

INTRODUCTION

Whether or not participation in athletics adversely affects the scholastic achievement of the athlete has long been a controversial question. Many insist that the time spent in practice and in participation in intercollegiate athletic contests could be devoted much more advantageously to study. Some even go so far as to insist that the majority of athletes are not primarily interested in their scholastic achievements but enroll in colleges and universities merely for the sake of athletics.

The purpose of this investigation, therefore, is to study by objective methods the effects of participation in intercollegiate athletics upon the scholastic records of the 279 athletes enrolled in Indiana University from September, 1934, to June, 1940, a period of six years. As the term is used in this study, an athlete may be defined as any student who at any time in his university career has been awarded an official varsity letter in any of the various intercollegiate sports at Indiana University.

Although there have been numerous studies on the scholastic ability of athletes, both in high school and in the university, the conclusions drawn by the investigators do not agree in all cases. Among the outstanding investigations concerning the effects upon scholarship of athletics in the secondary school are the following:

Cormany (3) studied the scholarship of the high school athlete in comparison with the academic school record of the non-athlete. Although he found a slight trend in favor of the athlete, he concluded that interscholastic athletics have a very negligible effect on scholarship. Approximately the same results were reported by Finch (6).

Snoddy and Shannon (22) compared the high school boys who were athletes with those who did not participate in sports. These students were enrolled in high schools in Greene County, Indiana, where basketball and football assume an important place in the activities of the schools. Very little difference was found in the ability of the two groups, the correlations between the two groups being very high both in intelligence and in school achievement.

At times athletes are accused of selecting so-called "easier" subjects in high school or college. Jones (13) investigated the truthfulness of this accusation as far as high school students were concerned. He found that the group of high school boys who took part in ath-

letics compared favorably with other groups in the matter of subject elections. He also found that the scholastic records made by the athletes were equally as good as those made by students who took no part in athletics.

Reals and Reess (18) paired athletes with non-athletes in the St. Louis high schools. They based their comparisons on the average marks the students made in all their subjects over a four-year period, on the intelligence quotients obtained in a mental test, on chronological age, and on results of the Sones-Harry High School Achievement Test. They concluded that the athletes, excepting those participating in track, had a slightly lower intelligence rating. On the Sones-Harry test the non-athletes showed a significantly favorable difference over the athletes.

Jacobsen (12), after reviewing the literature on many experiments, came to two significant conclusions, namely, that athletes are of average mental ability and that their scholarship achievement does not suffer appreciably during the period of participation in athletics.

Research that has been done on the college level does not show much variation from the above results. An interesting experiment was conducted by Shannon (21), who used objective tests in English in his comparison of high school athletes with non-athletes after they entered college. He found that the athletes, though below the other group in intelligence, were superior in achievement.

Eaton and Shannon (5) also studied the college careers of high school athletes and non-athletes. They compared letter men and non-letter men with respect to intelligence percentiles based on psychological entrance examinations and scholastic achievement. Of the group studied, those who had earned letters were of somewhat lower intelligence than those who had not, but the scholarship of athletes was higher in relation to their intelligence than that of the non-athletes.

Mehus (16) found that the difference between athletes and non-athletes at Wittenberg College was not large enough to be of any real significance.

Groves (7) studied the scholastic records of the football players of Fresno State Teachers College and concluded that, when judged in accordance with their aptitude, football men do as well as others in their academic work.

Hindman (9) chose all the male students who entered Ohio State University as freshmen in the fall of 1923, a total of 1,327 students. A division was made of athletes and non-athletes. In comparing the scholastic records of athletes of all sports with those of the non-athletes, the former were found to be slightly inferior, especially among students in the College of Engineering. Hindman's conclusion was that the study does not furnish any direct indication that athletes secure better grades than non-athletes, nor does it indicate that participation in athletics is detrimental to scholarship.

Hutchinson (11) made a study of 40 athletes in six sports and 67 non-athletes at Cornell College. Although his data were based on too small a number of students to be considered significant for conclusions, they did indicate, however, that athletes were not lower

in intelligence and that the difference between the two groups in scholarship was negligible.

Cooper (2) studied the effects of participation in athletics upon scholarship as measured by an achievement test. He paired athletes and non-athletes and found that the latter group showed a slight superiority in achievement and a greater variability than the athletes.

Maney (15) studied the scholarship of football players at Transylvania College during a period of ten years. He concluded that football contributed to the somewhat lower grades of the athletes. This belief was apparently further substantiated by the fact that football players made higher grades in the second semester when they were not engaged in athletic participation.

Ruble (19) in an investigation at Indiana University found indications that the athletes there when the study was made, about a decade ago, excelled the non-athletes both in intelligence and scholarship. Somewhat similar results were obtained in a study at Rutgers University (17).

In a survey at the University of Wisconsin (1) evidence was discovered that athletes were superior in academic achievement. The results showed that the athletes consistently excelled the average grade of the university as a whole for the period of the six years studied.

A rather extensive survey (14) was conducted in which forty-seven colleges contributed information and the results indicated that athletes may also be scholars.

Probably the best-known investigation is the one conducted by Savage (20) for the Carnegie Foundation concerning the athletic affairs of many institutions. The general conclusions relating to intelligence and scholarship of athletes were that athletes are of about the same intelligence but fall slightly below in academic achievement.

In general, although the results of these studies do not always agree, they do seem to indicate that the accusation that athletes merely enroll in colleges for the sake of athletics is not based on facts.

EXPERIMENTAL CONDITIONS

Subjects.—The students included in this study were all those who, at any time during the six-year period from 1934 to 1940, as Indiana University athletes, were awarded an official letter in intercollegiate competition. The number of such men totaled 279. Since 28 of these men received a letter in two sports, a total of 307 letters were received by these men. The list of the athletes and the sports in which they obtained letters was obtained from the official files of the athletic division of Indiana University. The number participating in each sport was: baseball, 43; basketball, 29; football, 77; golf, 20; swimming, 23; tennis, 16; track (including cross-country), 68; and wrestling, 31.

Data used.—These athletes, like all other students matriculating at the University, took the American Council on Education Psychological Examination when enrolling for the first time. The students' per-

centile ratings made on these tests are on file at the Guidance office at the University.

The scholastic record was obtained from the Registrar's office. All the grades these athletes received at the University were used in the study. Some of the athletes are still in the University, and for these the grades obtained up to and including June, 1940, were considered. None of the athletes studied in this investigation had completed less than four semesters, or approximately sixty semester hours of college work. Of the 279 men, 183 had finished their four years in college. Averages of their scholastic achievement were obtained for each semester, as well as a general average of all their college work.

RESULTS OF INVESTIGATION

Academic ability.—In order to get a true picture of the effect of athletics upon scholarship, the ability of the athlete has to be determined, for, if there is considerable variance in ability, similar results in academic achievement can hardly be expected. It was, therefore, deemed advisable to use the percentile ratings made on the American Council on Education Psychological Examination as a measure of the aptitude for academic achievement possessed by these athletes. The range of ability in the various sports was wide. In track, athletes made ratings from 1 to 100. In football, golf, swimming, and tennis the highest rating was 94 or above, and in baseball, basketball, football, and wrestling, as well as track, the lowest rating was 1. None of those who received their letters in swimming fell below the 24th percentile, while in the basketball group none ranked above the 75th percentile.

Since 167 of the 279 members of the athletic groups had a percentile of 50 or below, the median percentile of the whole group (41) was below that of the average college student. As far as the groups participating in the various sports were concerned, four groups fell above the median of 50 and four groups fell below. The swimming group made the highest median percentile rating (71), followed by the golf, track, and tennis groups, with ratings of 63, 56, and 52 respectively. The wrestling group led those which fell below the 50th percentile, making a median rating of 41, the same as the average of all athletic groups together. The baseball group made a rating of 35, the basketball group made 30, and the football group made 27, the lowest rating of all.

According to these percentiles, the same scholastic achievement should not be expected from one group as from another; for example, the swimming group should be expected to made higher grades in the University than the football group, whose ability ratings were considerably lower. Nor should it be expected that the scholarship of the athletic group as a whole should excel the average of the general student body, for their median percentile fell nine points below that of the median percentile of university students as a whole.

Scholastic record.—The scholastic achievement of the athletes was studied in terms of credit points. According to the system used at

Indiana University, credit points are awarded on the basis of grades, as follows: 3 credit points are given for each semester hour of A, 2 credit points for each hour of B, 1 credit point for each hour of C, no credit points for hours of either D or E, and for each hour of F one credit point is subtracted. The minimum number of credit points required for graduation is 1.00, and the average number made by all men students at the University in 1939-1940 was 1.43.

There was a wide variation in the grades received by the athletes studied in this investigation. While most of the grades were B or C, two of the athletes had made A, the highest possible grade, in all the courses they had taken at the University. The average number of credit points per credit hour made by these students was 1.34, somewhat below the average for all men students. However, the swimming group, golf group, and tennis group were definitely above the average, making 1.57, 1.55, and 1.50 respectively, and the track and wrestling groups made averages above the average for athletes but approximately the same as that for all men. The baseball, basketball, and football groups all fell considerably below the average, making 1.16, 1.26, and 1.16 respectively.

It is interesting to note that the four groups with a median aptitude percentile rank above average were also the four groups with scholastic averages as high or higher than the average of all men in the University, while those with lower ratings also made a lower scholastic average. On the whole, the credit point average rose with the increase in percentile rating, and it held up favorably with the credit point average of all men students, especially when the lower aptitude rating was taken into consideration. This would indicate that the scholastic success of the athlete was affected more by his academic ability than by his participation in athletics.

Still further evidence along this line is found in the fact that, when the group was divided into four sections according to percentile ratings, the average credit points earned by each of the four sections corresponded favorably with its average percentile rating. The lowest section, with percentiles from 1 to 25, made 1.09 credit points per credit hour; the next group, with percentiles of 26 to 50, made 1.17 credit points; the next group, with percentiles of 51 to 75, made 1.51 credit points; and the highest group, with percentiles of 76 to 100, made 1.80 credit points, much the highest credit point average. Thus it is evident that the academic aptitude and grades received by the athletes correspond very closely.

Comparison of grades made in active and non-active semesters.—A comparative study was made of the grades earned by the athletes in the semesters in which they participated actively in sports and those made in semesters when they did not spend so much of their time on athletics.

In this part of the study, athletes who participated in more than one sport were not included. Only six of the eight sports could be considered because of the fact that the swimming group was too small to give reliable results and the track group had no non-active semester,

since the members of this group, took part in cross-country in the fall and in track in the spring.

Football and basketball were classed as first semester sports, although there is some spring football practice and a part of the intercollegiate basketball games are played during the first few weeks of the second semester. However, far the greater portion of the time spent on these sports is in the fall semester. The average credit points earned by football players in the first semester were 1.10 and in the second semester, 1.23. Those earned by basketball players in the fall were 1.18 and in the spring, 1.34. Although these data show a significant difference in academic achievement in favor of the semester in which the athletes participated to a less degree in sports, they could not be regarded as valid because of the fact that in these two sports there is a certain amount of activity in the second semester. Then, too, the credit point average of men students as a whole on the campus showed an increase in the second semester which was even greater than that of these two groups of athletes.

Baseball is probably the only sport included in this study that is strictly a second semester sport. Participants in this group made almost the same credit point average the first semester as the second —1.165 as compared with 1.16. The averages of the golf, tennis, and wrestling groups, which are included as second semester sports, also showed little difference between the two semesters. These averages, with the first semester given first, were as follows: golf, 1.47, 1.49; tennis, 1.59, 1.52; and wrestling, 1.45, 1.47. Since the average credit points received by all men at the University were higher during the second semester, it would seem that participation in athletics tended to lower the averages of the athletes.

Results according to class standing.—The average credit points of the athletes were computed for each of the years in school (freshman, sophomore, junior, and senior) for the purpose of discovering whether athletics had any effect upon the scholastic record of students as they progressed from year to year in the Univerity. Only the 183 men who had actually completed four years of undergraduate college work could be included in this part of the study, since those who dropped out of school before completing work for a degree and those who were still in school did not have complete records for the four years.

The points earned by each of the sport groups in the four years at the University are given below. These averages are given in order, with the freshman year first: baseball, 1.24, 1.14, 1.23, 1.39; basketball, 1.31, 1.33, 1.33, 1.21; football, 1.12, 1.26, 1.20, 1.32; golf, 1.41, 1.55, 1.51, 1.51; swimming, 1.48, 1.60, 1.55, 1.58; tennis, 1.63, 1.59, 1.57, 1.69; track, 1.36, 1.41, 1.48, 1.56; and wrestling, 1.43, 1.54, 1.42, 1.71.

These data show that for five of the eight separate sport groups the highest average was made in the senior year. Of the three other groups, golf and swimming missed having their highest average in the senior year by only .04 and .02 points respectively. Four of the eight groups also had their lowest average in the freshman year. The baseball group was the only one which showed very wide variance

from this trend, and in this group the average for the freshman year was .10 points above that for the sophomore year.

The tendency for athletes in each class to make higher average credit points each year than they did when in school the year before seems to indicate that participation in athletics did not lower the grades of those who took part, as letters are given at Indiana University to those who are actively engaged in some sport and who become increasingly valuable to the group while in school. The fact that class averages among the student body as a whole increase each year because of drop-outs of the lower-ability students does not affect this group, since only those athletes were included who had completed their four years of work.

GENERAL CONCLUSIONS

Although the number of athletes included in this study was not large enough to give conclusive results, there was a sufficient number to show evidence of certain trends. From these data, the following general conclusions have been drawn:

1. The athletes at Indiana University who were included in this study were a little below the whole student body in aptitude as measured by percentile ratings made on the American Council on Education Psychological Examination.
2. The scholastic record of the athletes was commensurate with their ability as measured by their credit points earned.
3. There was a tendency for the athletes to receive a higher number of credit points than the non-athletes in relation to their percentile ratings on the aptitude test.
4. In sports in which the athletes participated most actively during the first semester, the increase in credit points earned the second semester agreed in general with the second semester increase in points earned by the student body as a whole.
5. In sports in which the athletes participated most actively during the second semester, there was little difference in average credit points earned. This was true in spite of the fact that the student body as a whole showed an increase the second semester.
6. Participation in the various sports seemed to have approximately the same effect on scholarship. No one sport seemed to affect it more than any other.
7. In several of the sports, the athletes received their lowest averages in their freshman year and their highest averages in their senior year.
8. According to the grades received, it would seem that the athletes studied did not neglect their studies for the sake of athletics.
9. Probably one of the most significant facts that these results show is that the athletes in this study were very much like other average students as far as their scholastic success was concerned.

BIBLIOGRAPHY

1. *American School Board Journal.* "Highest Ranks in Studies Made by Athletes." *American School Board Journal* 78: 117, February, 1929.

2. Cooper, John Andrew. *The Effect of Participation in Athletics upon Scholarship Measured by Achievement Tests.* Pennsylvania State Studies in Education, No. 7, School of Education, Pennsylvania State College, 1933. 9 p.

3. Cormany, W. J. B. "High-School Athletics and Scholarship Measured by Achievement Tests." *School Review* 43:456-61, June, 1935.

4. Davis, Elwood Craig, and Cooper, John A. "Athletic Ability and Scholarship; a Resumé of Studies Comparing Scholarship Abilities of Athletes and Non-Athletes." *Research Quarterly of the American Physical Education Association* 5:68-78, December, 1934.

5. Eaton, Dorothy, and Shannon, J. R. "College Careers of High-School Athletes and Non-Athletes." *School Review* 42:356-61, May, 1934.

6. Finch, F. H. "Athletics and Achievement in High School." *School and Society* 35:299-300, February 27, 1932.

7. Groves, John W. "Football Players Versus Non-Football Players." *Journal of Educational Research* 17:64, January, 1928.

8. Hall, Robert T. "How Athletes and Non-Athletes Compare in Mental Ability and in Educational Achievement." *American Physical Education Review* 33:388-9, June, 1928.

9. Hindman, Darwin A. "Athletics and Scholarship at the Ohio State University." *School and Society* 30:93-6, July 20, 1929.

10. Hindmarsh, Albert Edward. "Scholarships and Athletes." *North Central Association Quarterly* 5:340-4, December, 1930.

11. Hutchinson, Mark E. "College Athletics and Scholarship." *School and Society* 29:151-2, February 2, 1929.

12. Jacobsen, John M. "Athletics and Scholarship in the High School." *School Review* 39:280-7, April, 1931.

13. Jones, Harmon S. "A Comparison of the Subject Elections and the Scholastic Records of Athletes and Non-Athletes." *Research Quarterly of the American Physical Education Association* 5:101-10, December, 1934.

14. *Literary Digest.* "College Athletes Above the Average in Scholarship." *Literary Digest* 82:64-6, July 12, 1924.

15. Maney, Charles Albert. "Grades of College Football Students." *School and Society* 38:307-8, September 2, 1933.

16. Mehus, Oscar Myking. "Academic Achievement of College Students in Different Kinds of Extracurricular Activities." *Journal of Educational Sociology* 8:50-6, September, 1934.

17. *Nation's Schools.* "Athletes Have High Scholastic Standing at Rutgers." *Nation's Schools* 3:79, January, 1939.

18. Reals, Willis H., and Reess, Raymond G. "High-School Letter Men—Their Intelligence and Scholarship." *School Review* 47:534-9, September, 1939.

19. Ruble, Vern W. "A Psychological Study of Athletes." *American Physical Education Review* 33:219-34, April, 1928.

20. Savage, Howard J. *College Athletics and Scholarship,* pp. 49-65. Carnegie Foundation for the Advancement of Teaching, Twenty-second Annual Report, New York, 1927.

21. Shannon, John Raymond. "Scores in English of High-School Athletes and Non-Athletes." *School Review* 46:128-30, February, 1938.

22. Snoddy, Marvin L., and Shannon, J. R. "Standardized Achievement Measurements of Athletes and Non-Athletes." *School Review* 47:610-12, October, 1939.

23. Watson, Goodwin Barbour. "Personality Growth Through Athletics." *Journal of Health and Physical Education* 9:408-10, 463, September, 1938.

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By KATHLEEN DUGDALE

The School of Education at Indiana University has published the following bulletins. All of these may be obtained from the University Bookstore for 50 cents unless otherwise noted.

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Topical Analysis of 234 School Surveys. Compiled by the Bureau of Cooperative Research. Vol. III, No. 4, 1927. 111 p. (Supply exhausted.)

Proceedings of the Fourth Annual Conference on Elementary Supervision. Vol. III, No. 5, 1927. 64 p.

Proceedings of the Fourteenth Annual Conference on Educational Measurements. Vol. III, No. 6, 1927. 66 p.

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Proceedings of the High School Principals' Conference (November 18 and 19, 1927). Vol. IV, No. 4, 1928. 54 p.

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Proceedings of the Fifteenth Annual Conference on Educational Measurements. Vol. IV, No. 6, 1928. 73 p.

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Tentative Program for Teaching World Friendship and Understanding in Teacher Training Institutions and in Public Schools for Children Who Range from Six to Fourteen Years of Age. By Henry Lester Smith and Sherman Gideon Crayton. Vol. V, No. 5, 1929. 54 p.

Proceedings of the Sixteenth Annual Conference on Educational Measurements. Vol. V, No. 6, 1929. 96 p.

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Proceedings of the High School Principals' Conference (November 7 and 8, 1930). Vol. VII, No. 2, 1930. 70 p.

The Philosophy of Human Relations: Individual and Collective—A Source Book. By Henry Lester Smith and Harold Littell. Vol. VII, No. 3, 1931. 326 p. (75¢)

The Psychology of Human Relationships: Individual and Social—A Source Book. By Henry Lester Smith and Levi McKinley Krueger. Vol. VII, No. 4, 1931. 107 p.

Proceedings of the Eighteenth Annual Conference on Educational Measurements. Vol. VII, No. 5, 1931. 83 p.

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Bibliography of School Surveys and of References on School Surveys. By Henry Lester Smith and Edgar Alvin O'Dell. Vol. VIII, Nos. 1 and 2, 1931. 212 p. (75¢)

Proceedings of the Nineteenth Annual Conference on Educational Measurements. Vol. IX, No. 1, 1932. 139 p.

Bibliography of School Buildings, Grounds, and Equipment—Part II. By Henry Lester Smith and Forest Ruby Noffsinger. Vol. IX, No. 2, 1933. 182 p.

Bibliography of School Buildings, Grounds, and Equipment—Part III. By Henry Lester Smith and Forest Ruby Noffsinger. Vol. IX, No. 3, 1933. 130 p.

A Brief Summary of Literature on Leadership. By Henry Lester Smith and Levi McKinley Krueger. Vol. IX, No. 4, 1933. 80 p.

Proceedings of the Twentieth Annual Conference on Educational Measurements. Vol. X, No. 1, 1933. 98 p.

Bibliography of College and University Buildings, Grounds, and Equipment. By Henry Lester Smith and Forest Ruby Noffsinger. Vol. X, No. 2, 1934. 199 p. (75¢)

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Proceedings of the Twenty-first Annual Conference on Educational Measurements. Vol. XI, No. 1, 1934. 96 p.

Bibliography of School Buildings, Grounds, and Equipment—Part IV. By Henry Lester Smith and Forest Ruby Noffsinger. Vol. XI, No. 2, 1935. 216 p.

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Some Practical Efforts to Teach Good Will. By Henry Lester Smith and Peyton Henry Canary. Vol. XI, No. 4, 1935. 169 p.

Proceedings of the Twenty-second Annual Conference on Educational Measurements. Vol. XII, No. 1, 1935. 97 p.

A Basis for the Improvement of Education in Rural Monroe County, Indiana. By Henry Lester Smith and Forest Ruby Noffsinger. Vol. XII, No. 2, 1936. 168 p.

Reading Readiness—A Prognostic Study. By Wendell William Wright. Vol. XII, No. 3, 1936. 46 p.

Proceedings of the Twenty-third Annual Conference on Educational Measurements. Vol. XII, No. 4, 1936. 60 p.

Bibliography of Literature on the Teaching of English. By Henry Lester Smith and William Isaac Painter. Vol. XIII, No. 1, 1936. 299 p.

Bibliography of Literature on Education in Countries Other Than the United States of America. By Henry Lester Smith and William Isaac Painter. Vol. XIII, No. 2, 1937. 341 p. (75¢)

Character Development through Religious and Moral Education in the Public Schools of the United States. By Henry Lester Smith, Robert Stewart McElhinney, and George Renwick Steele. Vol. XIII, No. 3, 1937. 137 p.

Proceedings of the Twenty-fourth Annual Conference on Educational Measurements. Vol. XIII, No. 4, 1937. 100 p.

Bibliography of Literature on Education in Countries Other Than the United States of America (January 1, 1919, to December 31, 1934). By Henry Lester Smith and William Isaac Painter. Vol. XIV, No. 1, 1937. 189 p.

Two Studies in Education. By Henry Lester Smith and Merrill Thomas Eaton. Vol. XIV, No. 2, 1938. 42 p.

Bibliography of School Surveys and of References on School Surveys (Supplement to Vol. VIII, Nos. 1 and 2). By Henry Lester Smith and Edgar Alvin O'Dell. Vol. XIV, No. 3, 1938. 144 p. (75¢)

Proceedings of the Twenty-fifth Annual Conference on Educational Measurements. Vol. XIV, No. 4, 1938. 37 p.

Remedial Instruction in Reading with College Freshmen. By Nila Banton Smith. Vol. XV, No. 1, 1938. 35 p.

Two Studies in Arithmetic. By Henry Lester Smith and Merrill Thomas Eaton. Vol. XV, No. 2, 1939. 91 p.

The Relation of Retention to Speed of Learning. By Henry Lester Smith and Merrill T. Eaton. Vol. XV, No. 3, 1939. 105 p.

Proceedings of the Twenty-sixth Annual Conference on Educational Measurements. Vol. XV, No. 4, 1939. 53 p.

An Experimental Study of Standards for the Selection of Candidates for Teacher-Training Institutions. By Henry Lester Smith and Merrill Thomas Eaton. Vol. XVI, No. 1, 1939. 72 p.

State Control of Public School Finance. By Raleigh Warren Holmstedt. Vol. XVI, No. 2, 1940. 71 p.

Teacher Tenure in Indiana and the Courts. By Henry Lester Smith and R. Foster Scott. Vol. XVI, No. 3, 1940. 81 p.

Twenty-seventh Annual Conference on Educational Measurements. Vol. XVI, No. 4, 1940. 37 p.

A Study of the English Usage, Spelling, and Vocabulary of 251 Graduate Students at Indiana University. By Henry Lester Smith and Merrill T. Eaton. Vol. XVI No. 5, 1940. 71 p.

The Teaching of Arithmetic to Low-Ability Students in the Elementary Schools. By Henry Lester Smith and Merrill T. Eaton. Vol. XVI, No. 6, 1940. 130 p.

An Analysis of the Achievement of 184 Sophomores Enrolled in Teacher-Training Courses at Indiana University. By Henry Lester Smith and Merrill T. Eaton. Vol. XVII, No. 1, 1941. 31 p.